

Appln No. 10/573,230
Amdt date December 23, 2011
Reply to Office action of September 23, 2011

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1-24. (Cancelled)

25. (New) An insect communication-disturbing formulation comprising:
an insect-derived sex pheromone component for communication disturbance, or a synthesized pheromone component having the same molecular structure as the insect-derived sex pheromone component; and

a substrate containing the pheromone component, wherein the substrate is in the form of a molded body and is formed from a mixture of water, binder, and a calcined crystalline mineral powder prepared by steps consisting essentially of firing a crystalline mineral at 500 to 700°C for a time period from 5 to 120 minutes, wherein the powder has a particle size of 2 to 20 µm, and wherein the crystalline mineral is selected from the group consisting of clay minerals of a multiple-chain structure type having a fibrous form, 2:1 clay minerals having a tabular form, and silicas.

26. (New) The insect communication-disturbing formulation according to claim 25, wherein said crystalline mineral is a crystalline clay mineral.

27. (New) The insect communication-disturbing formulation according to claim 25, wherein the crystalline mineral is one selected from the group consisting of sepiolite, palygorskite and montmorillonite.

28. (New) The insect communication-disturbing formulation according to claim 25, wherein the time period is from 30 to 60 minutes.

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29. (New) The insect communication-disturbing formulation according to claim 27, wherein the time period is from 30 to 60 minutes.
30. (New) The insect communication-disturbing formulation according to claim 25, wherein the pheromone component is one selected from the group consisting of (Z)-8-dodecenyl acetate, (Z)-11-hexadecenyl acetate, (Z)-11-hexadecenal, N-dodecyl acetate, and mixtures thereof.
31. (New) The insect communication-disturbing formulation according to claim 27, wherein the pheromone component is one selected from the group consisting of (Z)-8-dodecenyl acetate, (Z)-11-hexadecenyl acetate, (Z)-11-hexadecenal, N-dodecyl acetate, and mixtures thereof.
32. (New) The insect communication-disturbing formulation according to claim 29, wherein the pheromone component is one selected from the group consisting of (Z)-8-dodecenyl acetate, (Z)-11-hexadecenyl acetate, (Z)-11-hexadecenal, N-dodecyl acetate, and mixtures thereof.
33. (New) The insect communication-disturbing formulation according to claim 25, wherein the molded body has a size from 4 mm to 150 mm.
34. (New) The insect communication-disturbing formulation according to claim 27, wherein the molded body has a size from 4 mm to 150 mm.
35. (New) The insect communication-disturbing formulation according to claim 30, wherein the molded body has a size from 4 mm to 150 mm.

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36. (New) The insect communication-disturbing formulation according to claim 31, wherein the molded body has a size from 4 mm to 150 mm.
37. (New) The insect communication-disturbing formulation according to claim 25, wherein the molded body is in the shape of a cylinder with a diameter of about 10 mm and a length from 7 mm to 150 mm.
38. (New) The insect communication-disturbing formulation according to claim 27, wherein the molded body is in the shape of a cylinder with a diameter of about 10 mm and a length from 7 mm to 150 mm.
39. (New) The insect communication-disturbing formulation according to claim 30, wherein the molded body is in the shape of a cylinder with a diameter of about 10 mm and a length from 7 mm to 150 mm.
40. (New) The insect communication-disturbing formulation according to claim 25, wherein the molded body is in the shape of a sphere with a diameter from 4 mm to 10 mm.
41. (New) The insect communication-disturbing formulation according to claim 27, wherein the molded body is in the shape of a sphere with a diameter from 4 mm to 10 mm.
42. (New) The insect communication-disturbing formulation according to claim 30, wherein the molded body is in the shape of a sphere with a diameter from 4 mm to 10 mm.
43. (New) The insect communication-disturbing formulation according to claim 1, wherein the binder is a water soluble macromolecular substance.

44. (New) The insect communication-disturbing formulation according to claim 43, wherein the binder is selected from the group consisting of polyvinyl alcohol, polyvinyl pyrrolidone, polyacrylic acid, polyacrylamide, polyethylene oxide, polyethylene imide, and carboxymethyl cellulose.

45. (New) A method for preparing a insect communication-disturbing formulation comprising:

firing a crystalline mineral, in a form of a powder with a particle size of 2 to 20 μm , selected from the group consisting of clay minerals of a multiple-chain structure type having a fibrous form, 2:1 clay minerals having a tabular form, and silicas at 500 to 700°C for a time period from 5 to 120 minutes to prepare a calcined crystalline mineral;

forming the calcined crystalline mineral in the form of the powder into a molded body with a size from 4 mm to 150 mm; and

impregnating the molded body with an insect-derived sex pheromone component for communication disturbance or a synthesized pheromone component having the same molecular structure as the insect-derived sex pheromone component selected from the group consisting of (Z)-8-dodecenyl acetate, (Z)-11-hexadecenyl acetate, (Z)-11-hexadecenal, N-dodecyl acetate, and mixtures thereof, to prepare the insect communication-disturbing formulation.